

WHAT IS CLAIMED IS:

1. A multicarrier transfer system based on the OFDM/CDMA modulation system, said system comprising:

5 a spread signal rearrangement unit which two-dimensionally arranges spread signals for a transmission data array on a frequency axis and a time axis first, and then rearranges the group of spread signals two-dimensionally arranged for one transmission array with a regularity,

10 wherein a transmission side transmits a signal generated by said spread signal rearrangement unit by time axis unit, and a reception side restructures the transmission data array by demodulating a received signals.

15 2. The multicarrier transfer system according to claim 1, wherein said spread signal rearrangement unit rearranges the group of two-dimensionally arranged spread signals for one transmission data array not with a regularity, but at randomly.

20 3. The multicarrier transfer system according to claim 1, wherein said spread signal rearrangement unit rearranges the group of two-dimensionally arranged spread signals for one transmission data array on the frequency axis not with a regularity, but at randomly.

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4. The multicarrier transfer system according to claim 1,
wherein said spread signal rearrangement unit divides the group
of two-dimensionally arranged spread signals for one
transmission data into several partial arrays and rearranges
5 the partial arrays within an OFDM signal not with a regularity,
but at randomly.

5. The multicarrier transfer system according to claim 1,
wherein said spread signal rearrangement unit can change an
10 arrangement ratio of the two-dimensionally arranged signals on
the frequency axis and time axis based on the conditions of a
transfer path.

6. A multicarrier modulation method applied in a
15 multicarrier transfer system based on the OFDM/CDMA modulation
system, said method comprising the steps of:

two-dimensionally arranging spread signals for one
transmission data array on a frequency axis and a time axis;
and

20 a step of rearranging the group of two-dimensionally
arranged signals for one transmission data system with a
regularity.

7. The multicarrier modulation method according to claim 6, wherein, in the spread signal rearrangement step, the group of two-dimensionally arranged signals on the time axis are rearranged not with a regularity, but at randomly.

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8. The multicarrier modulation method according to claim 6, wherein, in the spread signal rearrangement step, the group of two-dimensionally arranged signals for one transmission data array are rearranged on the frequency axis not with a regularity, but at randomly.

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9. The multicarrier modulation method according to claim 6, wherein, in the spread signal rearrangement step, the group of two-dimensionally arranged signals are divided into a plurality of partial arrays and the partial arrays are rearranged within an OFDM signal not with a regularity, but at randomly.

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10. The multicarrier modulation method according to claim 6, wherein, in the spread signal rearrangement step, a arrangement ration of the two-dimensionally arranged signals on a frequency axis and a time axis can be changed based on the conditions of a transfer path.

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11. A multicarrier transfer system based on the OFDM/CDMA modulation system, said system comprising:

a transmitter having,

5 a spread signal rearrangement unit which receives spread signals obtained by spreading of a transmission data array,

a) two-dimensionally arranges the received spread signals on a frequency-time axes system, and

b) rearranges on the frequency-time axes system with a regularity a group of spread signals to obtain a transmission
10 signal; and

a transmission unit which processes the transmission signal and transmits the processed transmission signal; and

a receiver having,

a receiving unit which receives the transmission signal;

15 and

a demodulating unit which reconstructs the transmission data array by demodulating the transmission signals.